

REMARKS

Claims 1, 3-9, 11-13, 16, 17 and 21-26 are currently pending in this application. Applicant respectfully requests reconsideration in light of the following remarks.

Claims 1, 4-9, 11-13, 16, 17 and 21-26 stand rejected under 35 U.S.C. § 103(a) as being anticipated by Kim (U.S. Patent No. 6,320,668) ("Kim") in view of Yamaguchi (Japanese Publication No. 02-074367 A) ("Yamaguchi"). This rejection is respectfully traversed and reconsideration is respectfully requested.

Claim 1 recites an image correction method including the steps of "obtaining expected signals," "obtaining detected signals ... for [a] plurality of known reference colors," "determining an error measure for each of said plurality of known reference colors" where the error measure is calculated as the squared difference between expected color value signals and actual detected signals, "applying a weight factor to said error measure for each of said plurality of known reference colors to obtain a respective weighted error measure for each of said plurality of known reference colors," and "obtaining a color correction matrix by simultaneously reducing the weighted error measure for each of said plurality of known reference colors."

Claim 6 recites an image sensor apparatus including "an image sensor device" and "an image processor ... to color-correct images ... according to a color correction matrix obtained by simultaneously reducing respective weighted error measures, each of said weighted error measures being calculated by applying a weight factor to a squared difference between signals seen for a known reference color from said color image array of said image sensor device and signals expected to be seen for said reference color."

Claim 13 recites a method of correcting an image including the steps of “obtaining signals expected to be seen for each of a plurality of known reference colors,” and “obtaining a color correction matrix for said pixels ... by simultaneously minimizing error measures relative to each color, wherein respective error measures ... are weighted such that said color correction matrix corrects for some ... colors more than ...[other] colors, each error measure representing a squared difference between signals actually seen for a known reference color ... and said signals expected to be seen for each of said reference outputs.”

Kim does not disclose or suggest applying a weight factor to the error measures to obtain a weighted error measure in order to correct some colors more than other colors, as is required by claims 1, 6 and 13. Yamaguchi is cited for disclosing that it is known in the art to weight certain colors more than others. (Office Action, pg. 4). Applicant respectfully disagrees and submits that Yamaguchi does not disclose or suggest the weighted error measure as recited in the above claims.

While the Yamaguchi reference uses the term “weighted” several times throughout the reference, the approach is different than the approach in the present application. Yamaguchi does not use the minimization of weighted least squares of differences between expected signal values and detected signals in order to determine the values of the color correction matrix as is done in the claimed invention. In Yamaguchi, the color sample input data is weighted by copying the appropriate colors from the data group of 64 input colors to make a data group of greater than or equal to 65. The color with the most copies is “weighted” the highest in the correction process because there are more copies of this color. The claimed invention applies a predetermined, subjective weight factor directly to the error measure (after the expected and detected signals have been compared) to obtain a weighted error measure. The weighted error measure is then used to obtain a color correction matrix.

Even if one of ordinary skill in the art would have found it obvious to weigh the error measures of Kim so that certain colors are weighted more than others (Office Action, pg. 2), the combination of Kim and Yamaguchi does not disclose or suggest the use of the weighted error measures and simultaneous minimization as recited by independent claims 1, 6 and 13.

Accordingly, Applicant respectfully submits that claims 1, 6 and 13 are allowable over the cited combination. Claims 4, 5, 16, 21, 23 and 25 depend from claim 1 and are allowable along with claim 1. Claims 7-9, 11, 12, 17 and 22 depend from claim 6 and are allowable along with claim 6. Claims 24 and 26 depend from claim 13 and are allowable along with claim 13. Applicant respectfully requests that the rejection of claims 1, 4-9, 11-13, 16, 17 and 21-26 be withdrawn and the claims allowed.

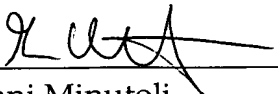
Claim 3 stands rejected under 35 U.S.C. § 103(a) as being anticipated by Kim in view of Yamaguchi and further in view of Endo (U.S. Patent No. 6,256,062) ("Endo"). This rejection is respectfully traversed and reconsideration is respectfully requested.

Claim 3 depends from claim 1. Claim 1 is allowable over Kim in view of Yamaguchi, as discussed above. Endo is cited as disclosing that the weight factor may have a different value for each of the reference colors. (Office Action, pg. 10). Endo does not remedy the above described deficiencies of the Kim and Yamaguchi combination. Accordingly, claim 1 and therefore claim 3 is allowable over the cited combination. Applicant respectfully requests that the rejection of claim 3 be withdrawn and the claim allowed.

In view of the above remarks, Applicant believes the pending application is in condition for allowance.

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Respectfully submitted,

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